PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No: 28110/35915A

PATENT APPLICATION TRANSMITTAL UNDER 37 C.F.R. 1.53

Box Patent Application Commissioner for Patents Washington, D.C. 20231

Sir:

Transmitted herewith for filing is the patent application of

Inventor(s): Dennis G. Ballinger, Deborah Loeb, Julie R. Montgomery, Y. Tom Tang,

Ping Zhou, Ryle Goodrich, Chenghua Liu, Vinod Asundi, Qing A. Zhao, Tom Wehrman, Radoje T. Drmanac, Feiyan Ren, Xiaohong B. Qian and

Dunrui Wang

Title: Materials and Methods Relating to Lipid Metabolism

1. Type of Application

This is a new application for a

☑ utility patent.

design patent.

This is a continuation-in-part application of prior application no.

2. Application Papers Enclosed

1 Title Page

110 Pages of Specification (excluding Claims, Abstract, Drawings & Sequence Listing)

4 Page(s) of Claims

1 Page(s) of Abstract

30 Sheet(s) of Drawings (Figs. 1A to 6D)

x Formal

Informal

122 Page(s) of Sequence Listing

CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this Patent Application Transmittal and the documents referred to as enclosed therewith are being deposited with the United States Postal Service on April 16, 2001, in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231 utilizing the "Express Mail Post Office to Addressee" service of the United States Postal Service under Mailing Label No. EL564460153US.

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| | 3. | Declaration or Oath | | | | | | | |
|---|----|---------------------|-----------------------|-----------|-----------|-----------|---|--|--|
| | | | | Enclosed | | | | | |
| The first transfer of | | | | | Execut | ted by (| check all applicable boxes) | | |
| | | | | | | Invent | or(s) | | |
| | | | | | | _ | representative of inventor(s) FR 1.42 or 1.43) | | |
| | | | | | | | nventor or person showing a proprietary interest on of inventor who refused to sign or cannot be ed | | |
| | | | | | | | The petition required by 37 CFR 1.47 and the statement required by 37 CFR 1.47 are enclosed. See Item 5D below for fee. | | |
| | | | ⊠ | | tion on | | dersigned attorney or agent is authorized to file this of the applicant(s). An executed declaration will | | |
| | 4. | Small Entity Status | | | | | | | |
| | | Ø | Applica | ant clain | ns small | entity : | status. See 37 CFR 1.27. | | |
| | | | | A smal | ll entity | stateme | ent is(are) attached. | | |
| , in the same | 5. | Additio | ional Papers Enclosed | | | | | | |
| == 12 | | | | Prelimi | nary An | nendme | nt | | |
| | | | | Informa | ation Di | sclosure | e Statement | | |
| | | | | Declara | ation of | Biologic | cal Deposit | | |
| | | | ⊠ | | | | py of sequence listing containing nucleotide and/or with Statement under 37 C.F.R. §§1.821(f) | | |
| | | | | Microfi | iche con | nputer p | program | | |
| | | | | Associ | ate Pow | er of A | ttorney | | |
| | | | | Verifie | d transla | ation of | a non-English patent application | | |
| | | | | An ass | ignment | t of the | invention | | |
| | | | | Reques | st and C | ertificat | ion Under 35 U.S.C. 122(b)(2)(B)(i) | | |
| | | | × | Return | receipt | postcar | d | | |
| | | | | Other | | | | | |



6. Priority Applications Under 35 USC 119

Certified copies of applications from which priority under 35 USC 119 is claimed are listed below and

- ☐ are attached.
- □ will follow.

| COUNTRY | APPLICATION NO. | FILED |
|---------|-----------------|-------|
| | | |
| | | |
| | | |

7. Filing Fee Calculation (37 CFR 1.16)

A. Utility Application

| CLAIMS AS FILED - INCLUDING PRELIMINARY AMENDMENT (IF ANY) | | | | | | | |
|--|-----------|-----------|-------------|----------|------------------------------|----------|--|
| · | | | SMALL | ENTITY | OTHER THAN A SMALL ENTITY | | |
| | NO. FILED | NO. EXTRA | RATE | FEE | RATE | FEE | |
| BASIC FEE | | | , | \$355.00 | | \$710.00 | |
| TOTAL | 33 - 20 | = 13 | X 9 = | \$117.00 | X 18 = | \$ | |
| INDEP. | 3 - 3 | = 0 | X 40 = | \$ | X 80 = | \$ | |
| ☑ First Presentation of Multiple Dependent Claim | | | + 135 = | \$135.00 | + 270 = | \$ | |
| | | | Filing Fee: | \$607.00 | OR | \$ | |

| В. | | Design Application (\$160.00/\$320.00) Filing Fee: \$ | |
|----|---------|--|---------|
| C. | | Plant Application (\$245.00/\$490.00) Filing Fee: \$ | |
| D. | Other I | Fees | |
| | | Recording Assignment [Fee \$40.00 per assignment] | \$ |
| | | Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached [Fee \$130.00] | d \$ |
| | | Other | \$ |

Total Fees Enclosed \$607.00

| 8. | Method | of | Payment | of | Fees |
|----|--------|----|----------------|----|------|
|----|--------|----|----------------|----|------|

| \boxtimes | Enclosed check in the amount of: | \$ <u>607.00</u> |
|-------------|--|------------------|
| | Charge Deposit Account No. 13-2855 in the amount of: A copy of this Transmittal is enclosed. | \$ |
| | Not enclosed | |

9. Deposit Account and Refund Authorization

The Commissioner is hereby authorized to charge any deficiency in the amount enclosed or any additional fees which may be required during the pendency of this application under 37 CFR 1.16 or 37 CFR 1.17 or under other applicable rules (except payment of issue fees), to Deposit Account No. 13-2855. A copy of this Transmittal is enclosed.

Please refund any overpayment to Marshall, O'Toole, Gerstein, Murray & Borun at the address below.

10. Correspondence Address

Customer No.: 04743

Respectfully submitted,

MARSHALL, O'TOOLE, GERSTEIN, MURRAY & BORUN 6300 Sears Tower 233 South Wacker Drive Chicago, Illinois 60606-6402 (312) 474-6300 (312) 474-0448 (Telefacsimile)

By:

Li-Hsien Rin-Laures, M.D.

Reg. No: 33,547

April 16, 2001

JOINT INVENTORS

"EXPRESS MAIL" mailing label No. EL564460153US.

Date of Deposit: April 16, 2001 I hereby certify that this paper (or fee) is being

deposited with the United States Postal
Service "EXPRESS MAIL POST OFFICE TO
ADDRESSEE" service under 37 CFR §1.10 on
the date indicated above and is addressed to:
Commissioner for Patents, Washington, D.C.

20231

Lynn Jamulis

APPLICATION FOR UNITED STATES LETTERS PATENT

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

Be it known that we, Dennis G. Ballinger a citizen of United
States, residing at 38 Bishop Lane, in the City of Menlo Park, 94025 and
State of California, Deborah Loeb a citizen of United States, residing at 5932
Valley Meadow Court, in the City of San Jose, 95135 and State of
California, Julie R. Montgomery a citizen of United States, residing at 23411
Glenwood Drive, in the City of Los Gatos, 95033 and State of California, Y.
Tom Tang a citizen of United States, residing at 4230 Ranwick Court, in the
City of San Jose, 95118 and State of California, Ping Zhou a citizen of
People's Republic of China, residing at 1461 Japaur Lane, in the City of San
Jose, 95132 and State of California, Ryle Goodrich a citizen of United
States, residing at 4896 Sandy Lane, in the City of San Jose, 95124 and

State of California, Chenghua Liu a citizen of United States, residing at 1125 Ranchero Way, Apt. 14, in the City of San Jose, 95117 and State of California, Vinod Asundi a citizen of United States, residing at 709 Foster City Blvd., in the City of Foster City, 94404 and State of California, Qing A. Zhao a citizen of People's Republic of China, residing at 1028 S. de Anza Blvd., Apt. B-210, in the City of San Jose, 95129 and State of California, Tom Wehrman a citizen of United States, residing at 300 Pasteur Drive, Edwards R314, Stanford University Medical Center, in the City of Stanford, 94305 and State of California, Radoje T. Drmanac a citizen of Yugoslavia, residing at 850 East Greenwich Place, in the City of Palo Alto, 94303 and State of California, Feiyan Ren a citizen of People's Republic of China, residing at 20685 Garden Manor Court, in the City of Cupertino, 95014 and State of California, Xiaohong B. Qian a citizen of People's Republic of China, residing at 3662 Tumble Way, in the City of San Jose, 95132 and State of California and Dunrui Wang a citizen of People's Republic of China, residing at 932 La Palma Place, in the City of Milpitas, 95035 and State of California have invented a new and useful MATERIALS AND METHODS RELATING TO LIPID METABOLISM, of which the following is a specification.